

REMARKS/ARGUMENTS

The Applicant hereby petitions under 37 CFR § 1.136(a) for an extension of time of one (1) month to January 7, 2007, for responding to the Office Action referenced herein.

Claims 1-3 and 5-21 remain in the application.

5 Claims 8, 16 and 17 are currently amended.

Claim Rejections Under 35 USC § 103

Claims 1-3, 5, 6, 8-10, 14, 15 and 16-19 were rejected under 35 USC § 103(a) over US Patent 6,749,160 to Richter in view of US Patent 4,020,575 to Kruger, et al.

Claim 1-3, 5, 6 and 8 all depend from base claim 1.

10 Claim 1 is not made obvious by Richter. On page 3 of the instant Office Action, the examiner argues that Richter teaches the method of “fusing a length of the rod to the tubular apertures of the base and the bracket.” However, Richter provides *no support* for this argument.

Rather, Richter clearly fails to disclose or suggest “fusing a length of the rod to the tubular apertures of the base and the bracket,” as argued by the examiner. Rather,

15 Richter only teaches “one end of a support arm 10 is mounted on the suction disc mounting arrangement” (column 4, lines 20-23 (emphasis added)); and the “end of the support arm 10 is received and firmly connected to the support plate 13” (column 4, lines 33-35 (emphasis added)). Richter’s “mounted” and “firmly connected” descriptions both clearly fails to disclose or suggest any sort of “fusing.” The applicant again respectfully argues that “mounted” and “firmly
20 connected” are not synonymous with the term “fused.” Thus, the terms “mounted” and “firmly connected” cannot disclose or suggest any sort of “fusing.” Accordingly, the applicant continues to assert that “fused” distinguishes from Richter.

Furthermore, Richter clearly fails to disclose or suggest a weld joint between the first and second ends of the metal rod and the respective support base and mounting bracket, as recited in
25 claim 1. Rather, as discussed above, Richter only teaches that “one end of a support arm 10 is mounted on the suction disc mounting arrangement” (column 4, lines 20-23); and that the “end of the support arm 10 is received and firmly connected to the support plate 13” (column 4, lines 33-35).

Furthermore, the aluminum rod 12 of Richter is not attached in any way to the respective sleeves 5 and 14. Rather, annular plug members 12a and 12b are only “disposed” in an unknown manner at opposite ends of the aluminum rod 12. See, e.g., Figure 2. *Only then* are the annular plug members 12a and 12b “received and firmly connected to the support plate 13.” See, e.g.,
5 column 4, lines 24-33 (reprinted below).

The support arm consists of a corrugated flexible plastic tube 11 through which an aluminum rod 12 extends in radially spaced relationship rod from the corrugated flexible plastic tube 11. At the opposite ends of the aluminum rod 12, annular plug members 12a and 12b are disposed on the aluminum rod 12 on which
10 the corrugated plastic tube is supported at the given radial distance from the aluminum rod 12 and by which the aluminum rod 12 and the corrugated plastic tube 11 are fixed relative to each other. Column 4, lines 24-33 (emphasis added).

The support plate 13 is provided with a sleeve 14 in which the other end of the support arm 10 is “received and firmly connected” in an unknown manner to the
15 support plate 13. Column 4, lines 33-35 (emphasis added).

Richter does not even discuss connecting the plug member 12a to the sleeve 5. See, Richter generally.

Thus, Richter does not teach any way of connecting annular plug members 12a and 12b on the aluminum rod 12. Rather, Richter only teaches the plug members 12a and 12b being
20 “disposed” on the rod 12 in an unknown manner.

The applicant respectfully argues that “disposed” is not synonymous with the term “fused.” Thus, the term “disposed” cannot disclose or suggest any sort of “fusing.” Accordingly, the applicant continues to assert that “fused” distinguishes from Richter. The examiner’s argument that Richter teaches “the rod being made of aluminum (12, See Col. 3 line 9 for rod material)
25 having a first end installed in the opening of the support base and fused direction to the support base and having a second end installed in the opening of the mounting means and fused directly to the mounting bracket,” as stated at pages 2-3 of the Office Action, requires reading *far more* into the Richter patent than Richter teaches. This argument uses impermissible hindsight.

Additionally, the “disposed” of Richter cannot disclose or suggest the weld joint between the first and second ends of the metal rod and the respective support base and mounting bracket, as recited in claim 1.

For at least the above reasons claim 1 is not made obvious by Richter, and claim 1 is believed
5 to be allowable there over.

Kruger fails to provide the deficiencies of Richter. Kruger fails to disclose or suggest a “*weld joint* formed directly between the first end of the metal rod and the support base,” and a “*weld joint* formed directly between the second end of the metal rod and the mounting bracket,” as now recited in claim 1.

10 Kruger teaches a badge formed of an envelope 12 having a front panel 14 with a major flap 16 and a minor flap 18. Column 1, line 63-column 2, line 5.

The front panel 14 with a major flap 16 and a minor flap 18 are all formed in a single sheet of acetate or similar transparent stiffly flexible plastic. Column 2, lines 6-8.

A clamping panel 20, also of acetate or other flexible plastic, is secured flat against the
15 flap 16. The clamping panel 20 is formed with a pair of spaced apertures 22 (FIG. 2) in a V-shaped slit 24. A safety-pin-like fastener 28 of wire is formed with a base run 30 opposite a pin run 36. A distal end of the tongue 38 of the V-shaped slit 24 is lifted up from the clamping panel 20 and is inserted between the base run 30 and the pin run 36 of the fastener so that the base run 30 is threaded into and out of the apertures 22 respectively in final assembly. Column 2, lines
20 9-30.

“Thereafter, the clamping panel 20 is secured as by ultrasonic welding or the like, directly against the major flap 16. This is as shown in the hatched area S in FIG. 1. It is important that the sealed area include at least some of the tongue 38 so that the tongue may not thereafter lift up and permit the escape of the fastener 28, as will be understood.” Column 2, lines 31-37.

25 Trapping of the base run 30 of the fastener 28 between the clamping panel 20 and the flap 16 is “readily accomplished by the sealing process.” The capture of the base run 30 through the apertures 22 “immobilizes the pin with the fastener 28.” Once the pin run 36 is applied to the clothing, the envelope 12 is not readily given to pivoting about. This keeps the envelope and material therein well oriented. Column 2, lines 38-45.

Thus, Kruger clearly fails to provide the deficiencies of Richter at least because Kruger fails to disclose or suggest a “*weld joint*” formed directly between the ends of the metal rod and the respective support base and mounting bracket, as recited in claim 1.

Rather, Kruger only teaches welding the plastic clamping panel 20 to the major flap 16.

5 See, e.g., column 2, lines 31-37. The base run 30 of the fastener 28 is only “captured” between the clamping panel 20 and the flap 16, which is “readily accomplished by the sealing process.” Column 2, lines 38-45. Thus, Kruger only teaches plastic-to-plastic welding that captures the metal base run 30 of the fastener 28. Kruger fails to disclose or suggest any welding of the metal base run 30 of the fastener 28 to anything. Kruger only teaches welding plastic to plastic.

10 Furthermore, Kruger requires the base run 30 to be “bent in the form of a sine wave” that “further immobilizes the fastener so that the pin run does not fold down against the back of the badge which would make it awkward to attach to clothing.” Column 2, lines 46-52. This need to “further immobilizes the fastener” emphasizes the fact that the metal base run 30 of the fastener 28 is not welded to either the clamping panel 20 or the flap 16. Instead, the base run 30 of the
15 fastener 28 must be bent in to a sine wave to keep from rotating between the clamping panel 20 and the flap 16.

Thus, Kruger fails to disclose or suggest a “weld joint” between first and second ends of the solid metal rod and the respective support base and mounting bracket, as recited in claim 1. Rather, by teaching the base run 30 of the fastener 28 merely being “captured” between by the
20 sealed area between the clamping panel 20 or the flap 16, Kruger actually teaches away from the “metal rod having a first end fused directly to the support base, and having a second end fused directly to a mounting bracket,” as recited in claim 1.

Richter cannot be combined with Kruger at least because Richter teaches metal-to-metal connections, while Kruger only teaches welding plastic to plastic, which is clearly a completely
25 different and unrelated process. Furthermore, there is no suggestion of teaching in either Richter or Kruger to combine plastic-to-plastic welding of Kruger either with the annular plug members 12a and 12b being “disposed” at opposite ends of the aluminum rod 12, nor with the annular plug members 12a and 12b being “received and firmly connected” to the support plate 13, as taught by Richter.

Merely showing that a rod 12 can be supported in some way on a support plate 13, and that it is known to ultrasonic weld acetate to itself cannot possibly disclose or suggest the present invention having a permanently bendable continuously solid metal rod having a first end installed in an opening of a support base and fused directly thereto with a weld joint formed directly
5 between the first end of the metal rod and the support base, and having a second end installed in an opening of a mounting bracket and fused directly thereto with a weld joint formed directly between the second end of the metal rod and the mounting bracket, as recited in claim 1. Rather, finding that such a combination teaches the present invention clearly requires impermissible hindsight.

10 Additionally, the present invention accomplishes in only a few simply assembled parts the same functions as the far more complex Richter device, which is a clear indicia of nonobviousness. See, *In re Edge*, 359 F.2d 896, 149 USPQ 556 (CCPA 1966). The court found that the omission of an element and retention of its function is an indicia of unobviousness. (Claims at issue were directed to a printed sheet having a thin layer of erasable metal bonded
15 directly to the sheet wherein said thin layer obscured the original print until removal by erasure. The prior art disclosed a similar printed sheet which further comprised an intermediate transparent and erasure-proof protecting layer which prevented erasure of the printing when the top layer was erased. The claims were found unobvious over the prior art because the although the transparent layer of the prior art was eliminated, the function of the transparent layer was retained since
20 appellant's metal layer could be erased without erasing the printed indicia.).

Here, the present invention couples the permanently bendable metal rod 12 directly to the support base 14 and mounting means 16. See, e.g., Figures 3 and 5. In contrast, Richter requires annular plug members 12a and 12b to be disposed on the opposite ends of the aluminum rod 12, then the annular plug members 12a and 12b must be firmly connected to the sleeves 5 and 14.
25 See, e.g., column 3, line 54-column 4, line 50; and Figure 2. Here, similarly to the printed sheet in *In re Edge*, the present invention accomplishes the flexible support apparatus 10 by making connections directly between the permanently bendable metal rod 12 and the support base 14 and mounting means 16 without the intervening annular plug members 12a and 12b required by Richter. Thus, here, the present invention omits the annular plug members 12a and 12b elements

required in the prior art while retaining the function of connecting the rod 12 to the support base 14 and mounting means 16, which is a clear indicia of nonobviousness.

For at least the above reasons, claim 1 is not made obvious by Richter and Kruger, and claim 1 is believed to be allowable there over.

5 Claims 2, 3, 5, 6 and 8 are all allowable at least as depend from allowable base claim 1.

 Claim 5 is further allowable independently of allowable claims 1, 2 and 3 as reciting each of the support base and the mounting bracket are formed of an ultrasonically weldable plastic material. Claim 5 differs in scope from allowable claim 1. However, the above arguments and reasons for allowance directed to claim 4 are sufficiently applicable to claim 5 as to make repetition
10 unnecessary. As discussed above, Richter teaches metal-to-metal connections, while Kruger only teaches welding plastic-to-plastic. Thus, for each of the reasons above, claim 5 is believed to be allowable independently of allowable base claim 1.

 Claim 8 is further allowable independently of allowable claims 1, 2 and 3 as reciting “each of the metal rod, the support base and the mounting bracket are formed of a material that is metal-
15 to-metal weldable by conventional means.”

 In contrast, as discussed herein above, Richter fails to disclose or suggest the aluminum rod 12 being “fused” to the sleeve 14 of the support plate 13. Richter further fails to disclose or suggest the aluminum rod 12 being “directly” connected to the sleeve 14 of the support plate 13. Rather, Richter only teaches the annular plug members 12a and 12b being “disposed” in an
20 unknown manner to the aluminum rod 12, and then in turn being “firmly connected” in an unknown manner to the support plate 13.

 Kruger fails to provide the deficiencies of Richter at least as to “each of the metal rod, the support base and the mounting bracket are formed of a material that is metal-to-metal fusible by conventional means,” as recited in claim 8. Rather, Kruger only teaches a major flap 16 formed of a
25 sheet of acetate or similar transparent stiffly flexible plastic (column 2, lines 6-8) and a clamping panel 20, also of acetate or other flexible plastic (column 2, lines 9-30), which is secured flat against the flap 16 by “ultrasonic welding or the like” (column 2, lines 31-37).

Thus, at least because Kruger only teaches welding of “acetate or similar transparent stiffly flexible plastic,” Kruger clearly fails to disclose or suggest any members being “formed of a material that is metal-to-metal fusible by conventional means,” as recited in claim 8.

For at least the above reasons, claim 8 is not made obvious by Richter and Kruger, and is
5 believed to be allowable independently of allowable claims 2 and 3 and allowable base claim 1.

Claim 9 differs in scope from allowable claim 1. However, the above arguments and reasons for allowance directed to claim 1 are sufficiently applicable to claim 9 as to make repetition unnecessary. Thus, for each of the reasons above, claim 9 is believed to be allowable. Therefore, the applicant declines to amend claim 9 at this time. Reconsideration and allowance of claim 9 are
10 respectfully requested.

Claim 10 is allowable at least as depend from allowable base claim 9.

Claim 10 is further allowable independently of allowable base claim 9 as reciting “the weld joints formed between the metal rod and each of the support base and the mounting bracket further comprise ultrasonic weld joints.”

As discussed herein above regarding claim 4, Richter only teaches the annular plug members 12a and 12b being “disposed” in an unknown manner on the respective ends of the aluminum rod 12, with the annular plug members 12a and 12b then being “firmly connected” in an unknown manner to the support plate 13. See, e.g., Figure 2. Thus, Richter fails to disclose or suggest weld joints formed between the metal rod and each of the support base and the mounting
15 bracket,” as recited in claim 10.
20

Also, Kruger only teaches the plastic clamping panel 20 being “welded” to the flap 16. As taught by Kruger, the metal base run 30 of the fastener 28 is not welded to either the clamping panel 20 or the flap 16.

Thus, Kruger fails to provide the deficiencies of Richter as to “the weld joints formed
25 between the metal rod and each of the support base and the mounting bracket further comprise ultrasonic weld joints,” as recited in claim 10.

For at least the above reasons, claim 10 is not made obvious by Richter and Kruger, and is believed to be allowable independently of allowable base claim 9.

Claims 14-15 are all allowable at least as depend from allowable base claim 9.

Claim 15 is further allowable independently of allowable base claim 9 as reciting "each of the support base and the mounting bracket further comprises a respective counter-bore substantially concentric with the respective tubular aperture and sized to admit the flexible plastic sheath."

5 As discussed herein above regarding claim 3, in Figure 2 Richter clearly teaches that such "counter-bore" is not anticipated. Rather, in Figure 2 Richter clearly shows that the "sleeve 14" is a constant inner diameter from the opening to the floor to receive the annular plug member 12b. Rather, the annular plug member 12b is stepped with a first larger diameter to mate with the "sleeve 14," and a second smaller diameter to mate with the corrugated plastic tube 11. Similarly,
10 the "sleeve 5" having a constant diameter from the opening to the floor to receive the annular plug member 12a. The annular plug member 12a is similarly stepped with a first larger diameter to mate with the "sleeve 5," and a second smaller diameter to mate with the corrugated plastic tube 11.

Thus, Richter even teaches away from the opening having a "counter-bore substantially concentric with the respective tubular aperture and sized to admit the flexible plastic sheath," as
15 recited in claim 15.

Kruger obviously fails to provide the deficiencies of Richter as to the "counter-bore" at least because Kruger only teaches the envelope 12 having a flat front panel 14 with flat major and minor flaps 16 and 18 all formed in a single sheet of acetate or similar transparent stiffly flexible
20 plastic (column 2, lines 6-8), and flat clamping panel 20 also formed in a sheet of acetate or other flexible plastic (column 2, lines 9-30).

For at least the above reasons, claim 15 is believed to be allowable independently of allowable claim 14 and allowable base claim 9.

Claim 16 differs in scope from allowable claim 1. However, the above arguments and
25 reasons for allowance directed to allowable claim 1 are sufficiently applicable to claim 16 as to make repetition unnecessary. Thus, for each of the reasons above, claim 16 is believed to be allowable, and reconsideration and allowance are respectfully requested.

Claims 17-19 are allowable at least as depending from allowable base claim 16.

Claim 17 is further allowable independently of allowable base claim 1 as reciting “ultrasonically welding the first and second ends of the metal rod in the respective tubular apertures of the support base and mounting bracket.”

5 Claim 17 differs in scope from allowable claim 5 as discussed herein above. However, the above arguments and reasons for allowance directed to claim 5 are sufficiently applicable to claim 17 as to make repetition unnecessary. Thus, for each of the reasons above, claim 17 is believed to be allowable independently of allowable base claim 16.

10 As discussed herein above regarding claim 5, Richter only teaches the annular plug members 12a and 12b being “disposed” in an unknown manner to the aluminum rod 12, and then in turn being “firmly connected” in an unknown manner to the support plate 13. See, e.g., Figure 2. Thus, Richter fails to disclose or suggest “ultrasonically welding the first and second ends of the metal rod in the respective tubular apertures of the support base and mounting bracket,” as recited in claim 17.

15 Also, Kruger only teaches the plastic clamping panel 20 being “welded” to the flap 16. As taught by Kruger, the metal base run 30 of the fastener 28 is not welded to either the clamping panel 20 or the flap 16.

Thus, Kruger fails to provide the deficiencies of Richter as to “ultrasonically welding the first and second ends of the metal rod in the respective tubular apertures of the support base and mounting bracket,” as recited in claim 17.

20 For at least the above reasons, claim 17 is not made obvious by Richter and Kruger, and is believed to be allowable independently of allowable base claim 16.

Claim 18 is further allowable independently of allowable base claim 16 as reciting “upsetting the metal around first and second ends of the metal rod.” In contrast, Richter provides absolutely no teaching as to conditioning the end of the aluminum rod 12. Rather, Richter only teaches swaging the annular plug members 12a and 12b onto the aluminum rod 12. Thus, Richter clearly cannot disclose or suggest “upsetting the metal,” as reciting in claim 18.

25 Kruger cannot provide the deficiencies of Richter at least because Kruger also provides absolutely no teaching as to conditioning the fastener 28 except the base run 30 being “bent in the form of a sine wave.” Thus, Kruger also clearly cannot disclose or suggest “upsetting the metal,”
30 as reciting in claim 18.

For at least the above reasons, claim 18 is not made obvious by Richter and Kruger, and is believed to be allowable independently of allowable claim 17 and allowable base claim 16.

Claim 19 is further allowable independently of allowable base claim 16 as reciting “forming a second tubular aperture therein that is of larger diameter and is substantially concentric with a first
5 tubular aperture having the metal rod fused therein” as to both the support base and the mounting bracket.

Claim 19 differs in scope from allowable claim 3 as discussed herein above. However, the above arguments and reasons for allowance directed to claim 3 are sufficiently applicable to claim 19 as to make repetition unnecessary. Thus, for each of the reasons above, claim 19 is believed to
10 be allowable independently of allowable base claim 16.

As discussed herein above regarding claim 3, Richter only teaches the support plate 13 having a “sleeve 14” having a constant inner diameter from the opening to the floor to receive the annular plug member 12b. Instead, Richer teaches the annular plug member 12b being stepped with a first larger diameter to mate with the “sleeve 14,” and a second smaller diameter to mate
15 with the corrugated plastic tube 11.

Kruger cannot provide the deficiencies of Richter at least because Kruger also provides absolutely no teaching as to any tubular aperture. Rather, Kruger only teaches a pair of apertures 22 for the fastener 28. Thus, Kruger also clearly cannot disclose or suggest “forming a second tubular aperture therein that is of larger diameter and is substantially concentric with a first tubular
20 aperture having the metal rod fused therein,” as reciting in claim 19.

For at least the above reasons, claim 19 is not made obvious by Richter and Kruger, and is believed to be allowable independently of allowable claims 17 and 18, and allowable base claim 16.

Claims 13, 20 and 21 were rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,749,160 to Richter and in view of US Patent 4,020,575 to Kruger, et al. as
25 applied to claim 9 and further in view of US Patent 6,811,146 to Giralt.

Claim 13 is allowable at least as depending from allowable base claim 9.

Claim 16 differs in scope from allowable claim 9. However, the above arguments and reasons for allowance directed to claim 9 are sufficiently applicable to claim 16 as to make

repetition unnecessary. Thus, for each of the reasons above, base claim 16 is believed to be allowable.

Claims 20 and 21 are allowable at least as depending from allowable base claim 16.

Furthermore, Giralt cannot provide the deficiencies of Richter and Kruger. Giralt merely
5 teaches a aluminum that is weldable material. See, e.g., column 4, lines 39-41. However, Giralt fails to disclose or suggest the flexible support apparatus having a permanently bendable continuously solid metal rod having a first end inserted into a tubular aperture of a support base and having a weld joint formed therebetween, and a second end inserted into a tubular aperture of a mounting bracket and having a weld joint formed therebetween, as recited in claim 9.

10 For at least the above reasons base claim 9 is not made obvious by the combination of Giralt with Richter and Kruger, and claim 9 is believed to be allowable.

Claims 7, 11 and 12 were rejected under 35 USC § 103(a) over US Patent 6,749,160 to Richter in view of US Patent 4,020,575 to Kruger, et al., and further in view of US Patent 6,637,642 to Lingnau.

15 As discussed herein above, the combination of Richter and Kruger clearly fail to show the basic inventive concept of base claims 1 and 9. The examiner admits, and the applicant agrees, that Richter and Kruger fail to disclose or suggest the metal rod having an upset metal finish prior to welding, or an upset surface material, or the method of upsetting the metal around the rod. Therefore, any teaching by Lingnau of welding including teaching that the upset finish prior
20 to welding is not effective to provide the deficiencies of Richter and Kruger. Therefore, for each of the reasons above, base claims 1 and 9 are believed to be allowable, and reconsideration and allowance are respectfully requested.

Claim 7 depends from base claim 1 which is not made obvious by Richter, as discussed above. As also discussed above, Kruger fails to provide the deficiencies of Richter.

25 Additionally, Lingnau fails to provide the deficiencies of both Richter and Kruger as to claim 7. Contrary to the examiner's belief, Lingnau fails to disclose or suggest the "upset metal finish" of the first and second ends of the metal rod, as recited in claim 7.

Rather, Lingnau only teaches a solid state welding process that combines the processes of induction welding and friction welding. Column 5, lines 15-18 ("The improved solid state welding process of this invention advantageously combines the processes of induction welding and friction welding to create a new solid state welding process which is superior to both of these processes.")

5 Thus, Lingnau does not even discuss the ultrasonic welding process of the present invention between a metal rod and an ultrasonically weldable plastic material, as discussed in claim 5.

Furthermore, the cited portion of Lingnau: column 8, lines 6-24 (reproduced herein below), recites only choice of a shielding gas, and induction coil features:

10 Although the most logical choice of a shielding gas is argon, experimentation has shown that argon causes arcing near the end of the heating cycle presumably due to the combined effects of the electric field from the coil and the infrared radiation from the faying surfaces. It has been found that nitrogen as a shielding gas eliminates arcing. Arcing may also be prevented by coating the induction coil with
15 a high dielectric strength electrical insulator. It is critical that the induction coil be carefully designed to develop a uniform induced current density across the faying surfaces. Experimentation has shown that the geometry of the flash upset and the finish weld profile are strongly affected by the dimensions of the coil relative to the tube dimensions as discussed more fully herein below. As set forth above,
20 however, the overall form of the flash upset is completely different from that produced by conventional frictional welding and the flash is substantially reduced by the solid state welding method of this invention. Column 8, lines 6-24.

The only reference to "upset" in the above portion of Lingnau cited in the Office Action uses the term "upset" in describing the overall form of the "flash upset." Column 8, lines 19-24
25 (reproduce above). As taught by Lingnau, the "flash upset" is only the "volume of ejected metal" at the weld due to the direct energy input of induction heating the surfaces to be welded. See, e.g., column 4, lines 60-66, which is reproduced herein below:

As set forth below, the improved solid state welding process of this invention results in a much smaller volume of ejected metal commonly known as "flash" or
30 "upset" by virtue of the direct energy input of induction heating the surfaces to be

welded which conventionally must be generated by friction heating of the rubbing surfaces. Column 4, lines 60-66 (emphasis added).

Thus, Lingnau clearly does not disclose or suggest any "upset metal finish" of the first and second ends of the metal rod for welding directly to the support base and the mounting bracket,
5 as recited in claim 7.

The examiner's argument that Lingnau discloses solid state welding including teaching that the upset finish prior to welding of the metal can and will affect the welding profile is not supported. Rather, as pointed out above and in earlier responses, the passage at column 8, lines 6-24 only describes the overall form of the "flash upset" produced by frictional welding processes.
10 "Flash upset" has absolutely nothing to do with "upset metal finish," as recited in claim 7.

For at least the above reasons, claim 7 is allowable over Richter in view of both Kruger and Lingnau.

Claims 11 and 12 depend from base claim 9 which is not made obvious by Richter, as discussed above. As also discussed above, Kruger fails to provide the deficiencies of Richter.

15 Claims 11 differs in scope from allowable claim 7. However, the above arguments directed to claim 7 are sufficiently applicable to claim 11 as to make repetition unnecessary. Thus, for each of the reasons above, claim 11 is believed to be allowable.

Claim 12 is allowable at least as depending from allowable claim 11 and allowable base claim 9.

20 Examiner's Response To Arguments

The examiner has suggested that any form of being "firmly secured" is equivalent to "welding" or "fusing" as an obvious way to connect a joint simply because the process, method and structure were well known at the time of the invention. The applicant takes exception. Such a broad interpretation of being "firmly secured" thus also includes nuts and bolts, rope ties, nails, or
25 anything else the examiner chooses. However, the examiner has not pointed out any disclosure, teaching or suggestion that the aluminum rod 12 of Richter is "fused" or "welded" to the respective sleeves 5 and 14. Therefore, the examiner is clearly using impermissible hindsight to

find that the aluminum rod 12 of Richter is "fused" or "welded" to the respective sleeves 5 and 14.

The examiner has also suggested that the aluminum rod 12 of Richter is "connected" to the respective sleeves 5 and 14 "even if there are other in elements in between, aiding in this connection." However, the annular plug members 12a and 12b between the aluminum rod 12 and the respective sleeves 5 and 14 clearly shows that, instead, the aluminum rod 12 is connected *to the annular plug members 12a and 12b*, and the annular plug members 12a and 12b are connected to the respective sleeves 5 and 14. Therefore, the aluminum rod 12 is clearly not connected to the respective sleeves 5 and 14.

Additionally, the annular plug members 12a and 12b intervening between the aluminum rod 12 and the respective sleeves 5 and 14 clearly show that the aluminum rod 12 is not "fused" or "welded" to the respective sleeves 5 and 14.

The claims now being in form for allowance, reconsideration and allowance is respectfully requested.

If the examiner has questions or wishes to discuss any aspect of the case, the examiner is encouraged to contact the undersigned at the telephone number given below.

Respectfully submitted,

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